

67,200-262; TSMC 99-545
Serial Number 09/588,788

REMARKS

Favorable reconsideration of this application in light of the above amendments and the following remarks is respectfully requested.

Claims 1-2, 4-8 and 16 are pending in this application. Claims 1-2, 4 and 16 are amended herein. No claims have been allowed.

Claim Objections

Claim 1 is objected to incident to two occurrences of the phrase "spiral planar spiral" that is awkwardly worded.

In response, applicant has amended claim 1 accordingly to address three occurrences of the phrase "planar spiral planar."

In light of the foregoing response, applicant respectfully requests that the Examiner's objection to claim 1 be withdrawn.

Claim Rejections - 35 U.S.C. § 102

Claims 1-2, 4-6, 8 and 16 stand rejected under 25 U.S.C. § 102(b) as being anticipated by Romankiw.

Romankiw at Fig. 1B teaches a planar spiral inductor structure comprising a series of spirals apparently having a narrower linewidth closer to a medium M than further removed from the medium M.

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At page 2, next to last paragraph of the office action made FINAL, the Examiner asserts that Romankiw at Fig. 1B teaches a single spiral planar spiral conductor layer 10a/b/c/d/e/f/g/h that forms a single spiral planar inductor, wherein a series of successive spirals formed within the planar spiral conductor layer 10a/b/c/d/e/f/g/h is formed with a continuous variation of a series of linewidths of the successive series of spirals, in accord with applicant's claim 1, claim 2, and claim 4, clauses 3.

In response, applicant asserts that Romankiw's planar spiral conductor layer 10a-10h as illustrated in Fig. 1B is not formed with a continuous variation of a series of linewidths of a successive series of spirals therein in accord with applicant's claims 1, 2 and 4, clauses 3. Rather, Romankiw's planar spiral conductor layer 10a-10h comprises a successive series of spirals apparently having within each spiral within the successive series a uniformly wider linewidth for a subgroup of spiral portions further removed from a medium and a uniformly narrower linewidth for a subgroup of spiral portions closer to the medium M.

Thus, since each and every limitation within applicant's invention as disclosed and claimed within claims 1, 2 and 4 is not disclosed within Romankiw with respect to a planar spiral conductor layer formed with a continuous variation of a series of linewidths of a successive series of spirals therein, applicant asserts that claims 1, 2 and 4 may not properly be rejected under 35 U.S.C. § 102(b) as being unpatentable over Romankiw. Since all remaining claims within the foregoing rejections are dependent upon claim 1 and carry all of the limitations of claim 1, applicant additionally asserts that those remaining claims may also not properly be rejected under 35 U.S.C. § 102(b) as being anticipated by Romankiw.

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As an additional basis for patentability of claim 1, applicant notes that Romankiw at Fig. 1B teaches a pair of planar spiral conductor layers 10a/c/e/g and 10b/d/f/h rather than a planar spiral conductor layer formed as a single spiral in accord with claim 1, clause 2.

In light of the foregoing responses, applicant respectfully requests that the Examiner's rejections of claims 1-2, 4-6, 8 and 16 under 35 U.S.C. § 102(b) as being anticipated by Romankiw be withdrawn.

Claim 2 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Wollnik (U.S. Patent No. 4,187,485).

Wollnik at Fig. 8 teaches a planar spiral inductor structure formed from a planar spiral conductor layer having a continuous variations of a series of linewidths of a series of spirals therein. At page 3, paragraph 5 of the office action made FINAL, the Examiner asserts that Wollnik's inductor structure inherently has an enhanced Q value in accord with applicant's claim 2, clause 4 insofar as it is fabricated with a series of linewidths.

In response, applicant has canceled claim 2.

In light of the foregoing response, applicant respectfully requests that the Examiner's rejection of applicant's claim 2 under 35 U.S.C. § 102(b) as being anticipated by Woolnik be withdrawn.

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Claim Rejections – 35 U.S.C. § 103

The Examiner has rejected claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Romankiw in view of Ohmura et al. (U.S. Patent No. 4,392,013; hereinafter "Ohmura").

At page 4, paragraph 2 of the office action made FINAL, the Examiner cites Ohmura as teaching linewidths of spiral conductors in a range of 7-10 microns or 34.9-190 microns. Such linewidths are properly needed to reject applicant's claim 7, but not otherwise found within Romankiw.

The Examiner rationalizes suggestion or motivation for modification or combination of Romankiw with Ohmura such as "to positively form spiral conductors free from short circuiting and with high reliability."

In response, applicant notes that the foregoing ranges that the Examiner cites as linewidths for patterned conductor layers, Ohmura in fact actually teaches (abstract) as thicknesses of patterned conductor layers. Thus, Ohmura does not lend to Romankiw that which is absent within Romankiw and needed to reject applicant's claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Romankiw in view of Ohmura. For this reason, applicant asserts that claim 7 may not properly be rejected under 35 U.S.C. § 103(a) as being unpatentable over Romankiw in view of Ohmura.

As a separate basis of patentability of claim 7, applicant predicates patentability of claim 7 upon claim 1.

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In light of the foregoing responses, applicant respectfully requests that the Examiner's rejection of claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Romankiw in view of Ohmura be withdrawn.

Other Considerations

Applicant has amended claim 4 to delete therefrom reference to a square or rectangle as a shape of applicant's series of spirals.

The Examiner has cited additionally cited Hanazono et al. (U.S. Patent No. 4,685,014) but not employed the same in rejecting any of applicant's claims to applicant's invention. No fee is due as a result of this amendment and response.

SUMMARY

Applicant's invention as disclosed and claimed within claim 1 and claim 4 is directed towards a method for fabricating a planar spiral inductor structure comprising a planar spiral conductor layer, wherein a successive series of spirals within the planar spiral conductor layer is formed with a continuous variation in at least one of: (1) a series of linewidths of the successive series of spirals; and (2) a series of spacings separating the successive series of spirals. In the alternative, the planar spiral conductor layer is formed as a single spiral planar spiral conductor layer, or with a certain defined geometric shape. Absent from the prior art of record employed in rejecting applicant's claims to applicant's invention is a teaching of each and every limitation within applicant's invention as disclosed and claimed within claim 1 and claim 4.


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CONCLUSION

On the basis of the above amendments and remarks, reconsideration of this application, and its early allowance, are respectfully requested.

Any inquiries relating to this or earlier communications pertaining to this application may be directed to the undersigned attorney at 248-540-4040.

Respectfully submitted,



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